

## AN AUSTRALIAN CRETACEOUS CIRRIPEDE.

By THOMAS H. WITHERS, F.G.S., F.Z.S.

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Mr. L. Glauert, of the Western Australian Museum, Perth, has kindly submitted to me some Cirripede remains that he has obtained from the Gingin "Chalk," with a request for a report on them.

The fossils from this deposit have been described by R. Etheridge, jnr. (1913, Bull. No. 55, W. Austr. Geol. Surv., iv., Palaeont. Contrib. to the Geology of Western Australia), who considered them to be of Upper Cretaceous age, and he gives in his paper full references to previous work on the Gingin "Chalk" and its fossils.

So far only a single Cirripede valve is known from the Australian Cretaceous, and this is the valve, a tergum from the Gingin "Chalk," described by R. Etheridge, jnr. (1913, pl. iii., figs. 4, 5), as a scutum, under the name *Pollicipes* (?) *ginginensis*.

Mr. Glauert's material comprises four valves, two carinæ and two terga. Although these valves evidently belong to the same species, and may all be referred to *Pollicipes* (?) *ginginensis*, the terga are more complete than the fragmentary holotype, and the carina is now made known. The new material, moreover, enables one to gain a clearer idea as to the affinities of the species.

### ***Calantica* (*Scillaelepas*) *ginginensis***

(R. Etheridge, jnr.)

(Pl. I., Figs. 1—8.)

1913.—*Pollicipes* (?) *ginginensis*—R. Etheridge, jnr., Bull. No. 55, W.A. Geol. Surv., p. 13, pl. iii., figs. 4, 5.

*Diagnosis.* A *Scillaelepas* with the valves comparatively thin. Carina, like that of *S. dorsata*, but much thinner, and on the inner surface the apical part is only slightly filled up solid. Tergum elongate, apical part curled towards the scutal side, occludent margin concave, and the scutal angle broadly rounded and protuberant. Scutum unknown.

*Holotype.* The apical half of a right tergum (Etheridge's pl. iii., figs. 4, 5) in the West. Austr. Geol. Surv. Colln.

*Material.*—In addition to the holotype we now have two carinæ and two terga (one right and one left valve).



This species was founded on the apical half of a tergum, but Etheridge described the valve as a scutum, and in consequence of this the original description leaves much to be desired.

*Description*.—Carina not divided off into parietes and intraparietes, moderately bowed inwards, flatly arched transversely, not carinate, with the basal margin somewhat angularly rounded. Valve comparatively thin, and on the inner surface only a small part below the apex appears to have been thickened and projected freely. The growth-lines are not at all raised, but there are slight traces of weak longitudinal ridges.

Tergum comparatively thin, sub-rhomboidal, elongate, comparatively flat transversely, with the apical part slightly curled towards the scutal side. Carinal margin almost regularly convex, not very distinctly separated into an upper and lower carinal margin; occludent margin concave and inwardly rounded, more than half the length of the scutal margin; scutal margin concave in the middle, the scutal angle being broadly rounded and protuberant. A flat-topped ridge with fairly steep sides extends from the apex and widens considerably towards the base, and this ridge is followed on the scutal side by a wide depression bounded by the rounded occludent margin; the flat-topped ridge is variably developed in the two terga. On the outer surface the growth-lines are irregularly raised, and the valve is weakly and finely ridged longitudinally, but the longitudinal ridges are more clearly seen on the scutal side and on the flat-topped ridge. On the inner surface only a very narrow border along the inner occludent and upper carinal edges is raised and thickened and marked with growth-lines.

*Measurements*.—Carina; the smaller valve has a length of 3.2mm., and the larger slightly incomplete valve, a length of 8.8mm. Tergum; the right valve has a length of 11.0 mm., and a breadth of 6.0mm., and the left slightly incomplete valve a length of 8.2mm. and a breadth of 4.8mm. The holotype tergum is said to have a breadth of 9.0mm.

#### *Systematic Position.*

The discovery of new types of fossil Cirripedia, while adding to our knowledge of the evolution of the group, is making it increasingly difficult to refer isolated valves to their proper systematic position. Nevertheless, when one studies the known forms seemingly quite minor characters serve to distinguish the valves of the different genera.

The chief features of the present valves are (1) the carina is simple, that is, it is not divided off into parietes and intraparietes, nor is it carinate, (2) the tergum has a rather wide, flat-topped apico-basal ridge on the scutal side.



Etheridge was doubtful whether he should refer the holotype (tergum) of the present species to the genus *Pollicipes* or *Scalpellum*, but he left it in *Pollicipes* with a query. He suggested a comparison with *Pollicipes striatus* Darwin, and *Scalpellum maximum* (J. De C. Sowerby), but both those species are now included in the genus *Scalpellum* (*sensu lato*), the former being included in the sub-genus *Cretiscalpellum* Withers, and the latter in the sub-genus *Arcoscalpellum* Hoek.

Our species is obviously not an *Arcoscalpellid*, for in that group the carina is divided off into parietes and intraparietes. It cannot be referred to *Cretiscalpellum*, in which the carina, while simple, is carinate, and the tergum has usually a wide furrow extending from the apex to the scutal margin, and bounded by a sharp fold close and parallel to the occludent margin.

Much more resemblance is shown to the valves in the sub-genus *Scillaelepas* of the genus *Calantica*, especially such a form as *C. (Scillaelepas) dorsata* (Steenstrup), from the Danian of Faxe, Denmark, for the carina agrees in being simple and not carinate, and the tergum agrees in having a flat-topped apico-basal ridge.

Our species differs from *S. dorsata* in the valves being thinner, the carina being filled up solid only to a small extent below the apex, and in the tergum by the apical part being curled towards the scutal side, the occludent margin being concave, and the scutal angle being broadly rounded and protuberant.

Having only a carina and tergum, it may be rash to give the reconstruction of the capitulum (pl. I., fig. 8), but it will perhaps give added zest to the search for the valves of the lower whorl, from which it would be possible to conclusively show that the present species really is a true *Scillaelepas*.

#### EXPLANATION OF PLATE I.

*Calantica (Scillaelepas) ginginensis* (R. Etheridge, jnr.)

Upper Cretaceous (?Upper Senonian): Gingin, Western Australia.

1. Carina.—Outer view, the surface being much worn. W. Austr. Mus., G. 3749.
2. Id.—Inner view.
3. Id.—Side view.
4. Tergum (right).—Outer view. W. Austr. Mus., G. 3750.
5. Id.—Inner view.
6. Tergum (left).—Outer view. Brit. Mus., In. 22434.
7. Id.—Inner view.
8. Reconstruction of capitulum. The carina and tergum only are so far known.

1 — 7 × 4 diam.